

CLAIMS

1. System for monitoring the movements, if any, of construction work parts, comprising:

- 5 - a plurality of measurement taking stations able to sight targets and capable of being mounted at least in part on said parts;
- a plurality of reference targets linked to at least one station;
- 10 - a plurality of monitoring targets mounted on said construction work parts, at least one of said monitoring targets being associated with at least two stations;
- means to control each station for measuring at
15 successive instants the coordinates of the reference targets and of the monitoring targets which are associated therewith with respect to said station; and
- means of processing the coordinates of the
reference targets and of the monitoring targets
20 computed by said stations at said successive instants so as to deduce therefrom a displacement, if any, of a monitoring target between two measurement instants.

2. Monitoring system according to Claim 1, further
25 comprising:

- a monitoring centre comprising said processing means; and
- means for transmitting from each station to said
monitoring centre said coordinates of the monitoring
30 and reference targets measured by said stations at said successive instants.

3. Monitoring system according to Claim 2, wherein said processing means comprise means for applying, for
35 each measurement instant, a mathematical algorithm to the set of measured coordinates of the reference targets and of the monitoring targets measured by the set of the said stations.

4. Monitoring system according to Claim 1, wherein at least two monitoring targets are associated with each station, said two targets also being associated with another station.

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5. Monitoring system according to Claim 4, wherein each monitoring target associated with two stations consists of two target elements mounted on a construction work part in such a way that their mutual distance is fixed, one of the two stations measuring the coordinates of one of the monitoring target elements, the other station measuring the coordinates of the other monitoring target element.

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6. Monitoring system according to Claim 3, wherein said mathematical algorithm is a method of least squares for calculating for each measurement instant the absolute position in space of the said monitoring targets, and said processing means furthermore comprise means for comparing the absolute position of each monitoring target at the successive measurement instants.

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7. Monitoring system according to Claim 1, wherein said coordinates are polar coordinates.

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8. Monitoring system according to Claim 6, wherein said processing means furthermore comprise means for identifying the reference targets, if any, or the monitoring targets, if any, corresponding to residuals obtained by the method of least squares greater than those of the other targets, and means for ignoring the measurements involving the said identified targets.

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